HANDBOOK OF PHONOLOGICAL DATA
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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875 Mixtec

875 01 p[30]
(loan)
[b][60]

875 02 t
[t-nasal-release][61]

875 03 k
[g][60]
[yod-trema][62]
(free)

875 04 k-labialized
[g-labialized][60]

875 05 t/s-hacek

875 06 beta[31]
[w][63]
(free)

875 07 eth[32]
[d][64]

875 08 s
[t/s][65]

875 09 s-hacek
[s-hacek-retroflex][66]

875 10 z-hacek[31]
[d/z-hacek][65]
[z-hacek-retroflex][66]

875 11 gamma[34]
(loan)

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12 m[31]

13 n[31]
[n-voiceless][67]
(free)

14 n-palatal[31]

15 eng[31]
[eng-voiceless][68]

16 l[01 31]

17 r-trill[01 31 37]
(loan)
[r-flap][69]

18 glottal stop[02]

19 h[03]

51 i[04]
[i-voiceless][70]
(free)
[i-over-short][71]

52 i-nasalized[05 31]
[i-over-short-nasalized][71]

53 e
[epsilon][72]

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(free)

54 e-nasalized[05 31 39]
(limited)

55 a

56 a-nasalized[05 31]

57 u[40]

58 u-nasalized[05 31]
[m-syllabic][73]
(free)

59 o
[o-open][74]

60 o-nasalized[05 31]
[o-open-nasalized][74]

81 high
[higher-high][75]

82 mid
[higher-mid][76]
[lower-mid][77]
*/low/

83 low
*[lower-mid]
[low-falling][78]

875 $a Mixtec $b Molinos $d Oto-Manguean $e Mexico (Oaxaca) $f 250,000 $g Merritt Ruhlen $g Jim Lorentz (review) $g John Crothers (editor)

875 $a Hunter, Georgia G. and Eunice V. Pike $b 1969 $c The Phonology and Tone Sandhi of Molinos Mixtec $d Linguistics 47.24-40. $q informant $r 2 years

875 $a **INTONATION** $A "A phonological phrase is made up of one or more phonological words. It is characterized (1) by a following pause, (2) by a downdrift of pitch, and (3) by phrase stress." Phrase stress falls on the last syllable, unless it has the form /h, glottal stop/ + V, in which case it is prefinal.

875 $a **MORPHEME STRUCTURE** $A A problem in this description is what is called a "couplet," a two syllable unit which is "the nucleus of each phonological word." (p.24) Its boundaries are always clearly marked in the text, however it is not clear whether, or in what way, it might be related to traditional units of descriptive phonology or morphology. (It seems that stems are frequently "couplets.") [JL] [JL]

875 $a **NASAL PROSODY** $A Nasal consonants occur only before nasalized vowels, and voiced oral consonants only before oral vowels. Assignment of the two series of consonants [m, n, n-palatal] and [beta, eth, z-hacek] to a single phonemic series is plausible, but this would raise questions about [eng] and [l] which seem only to occur before nasal or oral vowels respectively.

875 $a **STRESS** $A Word stress is determined by tone sequences and the location of the stem (couplet) according to the following rules. The last high tone (or last mid, if there is no high) which is followed by a lower tone is stressed, provided this stress does not occur before the stem. Words with all high or all mid tones have equal stress on all syllables. Words with all low tones, or rising tone sequences, stress the first stem syllable. But if sequences of two high or two mid tones are preceded by a lower tone, there is a slight lengthening (marked as stress) of the vowel with the lower tone. Note that this word stress is different from phrase stress. (See intonation.) (p.25)

875 $a **SYLLABLE** $A (C)(C)(C)V(glottal stop) $A All vowel clusters are disyllabic.

875 $a **TONE** $A domain of tone: syllable

875 01 $A Exact point of articulation for /l, r-trill/ not specified. [MR]

875 02 $A "When preceding a consonant word medially, the /glottal stop/ may have a voiced release with the vocoid quality of the preceding vowel.... This vocoid release contrasts with a sequence in which a vowel follows a /glottal stop/, in that the allophonic vocoid release of the /glottal stop/ is shorter than a vowel in that environment." (p.29)

875 03 $A /h/ is called "velar," however the symbol /h/ is used, and other evidence (behavior in phonological rules) indicates that a glottal fricative is intended. [JL]

875 04 $A /i/ might have the variant [i-bar] after /u/. The source gives such a rule but the symbol used is plain [i], which makes no sense in that context. Presumably a typo. [JL]

875 05 $A "Of all nasalized vowels /u-nasalized/ is the most heavily nasalized and /a-nasalized/ is the least nasalized.... The vowels are more heavily nasalized after /eng/ than after other nasal consonants.... Nasalized vowels are more heavily nasalized when following /k/ than when following other oral consonants." (p.30-31)

875 30 $A /p/ is "rare, loan words only." (p.28)

875 31 $A See note on nasal prosody.

875 32 $A The distribution of /eth/ is peculiar, to judge from the examples; it occurs only in suffix-initial position as [eth], while in stems, only [n.d] is found. The latter is by far the most frequent. In addition, both of these could be considered allophones of /n/, occurring before oral vowels. [JHC]

875 34 $A "In addition to the phonemes which occur in native words, there is a voiced fricative /gamma/ which occurs in Spanish loan words. It is more fortis than the allophone [gamma-approximant] of /k/." (p.28)

875 37 $A There are "only two words with /r-trill/ which are not loan words." (p.28)

875 39 $A /e-nasalized/ is "rare." (p.30)

875 40 $A /u/ does not follow /k-labialized/ and follows /m/ only in loan words. (p.34)

875 60 $A "The stop phonemes /p, k, k-labialized/ (but not /t/ or /t/s-hacek/) have voiced allophones when following a (homorganic) nasal consonant." (p.28)

875 61 $A "/t/ has a voiceless nasal release when preceding a nasalized vowel." (p.29)

875 62 $A "The phoneme /k/ varies from a voiceless velar stop to a voiced velar lenis fricative (= [yod-trema]) when in a postcouplet syllable which is not phrase final." (p.28)

875 63 $A "The voiced bilabial fricative /beta/ fluctuates in the degree of rounding and friction. When it is word initial, and also when contiguous to a front vowel it is usually flat and fricative [i.e. [beta]--MR].... When preceding /u/ and also when following /glottal stop/, the rounded allophone [i.e. [w]--MR] is the more frequent." (p.29)

875 64 $A "The fricative /eth/ has a stop allophone...when following a nasal consonant (i.e. /n/)." (p.29)

875 65 $A "The fricatives /s, z-hacek/...have affricate allophones when following a nasal consonant (i.e. /n/)." (p.29)

875 66 $A "The sibilants /s-hacek, z-hacek/ are retroflexed when preceding /a, o, u/.... They are not retroflexed, however, when preceding front vowels." (p.29) (nor, apparently, following /n/, even though occurring before a non-front vowel.)

875 67 $A "The dental nasal /n/ varies to voicelessness when phrase initial preceding a cluster of voiceless consonants." (p.29)

875 68 $A "/eng/ is voiceless when preceding /h/.... With some speakers this alternates with the absence of the nasal consonant." (p.29)

875 69 $A "/r-trill/ has a flap allophone which occurs word medially." (p.29)

875 70 $A "The vowel /i/...may optionally be voiceless when following a voiceless consonant phrase finally." (p.31)

875 71 $A High, front vowels are over-short when they occur before a couplet-initial vowel.

875 72 $A "The vowel /e/ has allophones ranging from [e] to [epsilon]. The [e] is the more frequent when a member of a geminate cluster.... The [epsilon] is the more frequent when contiguous to /glottal stop/...and when following /h/ or /k/.... But if a geminate cluster follows /k/, the allophone [e] occurs." (p.31)

875 73 $A "/u-nasalized/ varies from a vocoid to a syllabic [m-syllabic] when contiguous to /k/ or /glottal stop/." (p.30)

875 74 $A "The vowel /o/ varies to the open allophone [o-open] following a nasal consonant or /k-labialized/, and when it is a member of the geminate cluster /o.o/." (p.31) (A glottal may optionally intervene between the geminate vowels.)

875 75 $A /high/ tone is realized as [higher-high] preceding a lower tone (/mid/ or /low/) in the same word.

875 76 $A "/mid/ tone has a raised allotone when preceding a /low/ tone within a word." (p.27)

875 77 $A "/mid/ tone has a lowered allotone when following a /low/ tone within a word." (p.27)

875 78 $A "/low/ tone glides downward when phrase final." (p.28)

875 79 $A "/low/ tone has a raised allotone when following a /mid/ tone within a word." (p.28)